

COMMODORE 64[®]

USER'S GROUP

NEWSLETTER

JUNE, 1983

VOL.1 No. 2

With the sounds of our Second Meeting (*I think call them meetings now*) still resounding in my ears, I would like to again convey some thoughts to those who read this newsletter.

I think we can be called members now, as quite a few people I spoke to seemed to want to become deeply involved, and I know that is what membership is all about. In several other organisations in which I have been involved as Secretary, you get about four people involved and the whole weight of its being revolves around their dedication. When their enthusiasm wanes, due to lack of support, the whole thing folds. But I can't see this happening here, as there are so many people with a common interest who seem to have the involvement and experience to see us survive.

With humble thanks I receive your acclaim for the last newsletter, but I am still seriously concerned with the lack of reader contributions. If you wish me to fill this newsletter with my own experiences, you would soon become very bored. Neil again expressed the need for our survival as being involved as much as our time allows, with contact with other users, and especially our own members, and I can think of no better method than by contributing to this newsletter. So, if you have any articles, thoughts, subroutines, programs, even drawings or cartoons which you think may be of interest to other members, please feel free to correspond.

Following the surveys which were taken at our first gathering it was revealed that the demographic centre of our membership (with a few exceptions like Mt. Macedon, Mildura, Laverton etc.) seems to be around the Mitcham/Nunawading area. Due to the efforts of **COLIN BIRD** who seems to have spent a lot of time researching leads and writing letters to Councils and Schools, it was agreed that we accept the proposal to use the facilities of the *Nunawading Primary School*, in Springvale Road, Nunawading for the grand total of \$10.00 per night. There seems to be ample parking, a fairly large area with five power points for our use, and a general atmosphere conducive with our needs. Therefore, our next meeting will be held at the above venue on Tuesday, 19th July, 1983 at 7.30 p.m. (Don't forget to bring a chair, and an ashtray if you smoke.) I have since heard that this venue has been confirmed as a firm booking and Colin has signed his life away with some form of guarantee.

Thanks again for your considerable efforts, Colin.

Paul and Joan Rautman, being librarians for the VIC-20 Group (and having a wide range of experience in this field) have been nominated in a similar capacity for our Group, and they would be appreciative to hear from anyone who has programs for inclusion in our library of public domain software. A fact I did not realize was that a program could be typed in from a magazine (not a book) with suitable remark statements as to original author, magazine and typist acknowledgement. It seems we have several programs at the moment and details of their availability will be announced at the next meeting. In the meantime, if you have a program, subroutine or goodie of any kind, Paul and Joan would like to receive it for inclusion in their vast collection. The address is shown on another page.

With these various items being adequately dealt with, we got down to the serious side of the meeting — the learning and instruction part. Neil explained the use of the "GET" Statement (single and multi-character) and the "INPUT" facility. For those not completely familiar with these functions, the explanations would have been quite enlightening. As you can imagine with the complexities of these subjects, they are hard to report, but included elsewhere are listings for your general interest.

Type these routines in and play around with them. Feel free to make any changes you like to them, and if you develop any new ideas share them with all.

I was asked a few times during the night about changes to printed programs. Several people are afraid to deviate from listings, as they are scared of blowing up their '64'. All I can pass on is the message I received in my early days — "There is no entry on a keyboard that can seriously damage any internal workings of a computer!". Now this is not quite true with a PET, but I haven't discovered any entries on the '64' as yet. So why not change programs around, you can't do any damage and you may discover what it's all about.

Another subject brought up several times was how to use a Data Base. Now this can be quite complex, not in 'how to run' but more in what it can do. Some people think they can write their own, so I wish them luck.

I am personally using a Data Base with some 2,000 records which was comparatively inexpensive. I can add to, change, delete, select, sort and print any of the 2,000 records in a matter of seconds. But the main problem with

anyone not familiar with these programs is to know exactly the result you wish to achieve at the end and initially set up the DB at the start with the relative information to receive records for the required end result.

Again the consensus of the meeting was gratitude to the staff of PANATRONICS for the use of their facilities, and I feel sure you will all join together to thank them personally for their efforts.

See you on the 19th JULY at NUNAWADING PRIMARY SCHOOL.

Frank Martin.

Our 'New' member to the family.

At the kind invitation of one of our members, BOB DELANEY, I attended the meeting of the Commodore Users' Group which met at Laverton Airforce Base on 29th June, 1983. Being a restricted entry base, I was quite surprised at the attendance of about 30 people.

As they are newly formed like ourselves, the business side of the evening was over virtually before it began. They have no committee as such, but are just a group of interested users coming together twice a month to exchange ideas.

One point which was raised was that they would like to become a 'sister' branch of our Group, thereby enabling exchange of ideas between the two groups. With what I saw, I think this would be of advantage to all.

Although there were a few '64's' in view, the main part of their group seemed to be VIC-20 users, but as the '64' gets more widely known, this trend is sure to change.

Neil Brandie, accompanied by Greg. Cameron came along to show the latest software to the Group, and I am sure that this was greatly appreciated. The software was there for anyone who was interested to run for themselves, and evaluate their needs. Neil gave a short talk on the aims of our Group and extended an open invitation for anyone to come to our meetings.

Then we got to the 'real business' of the night — the exchange of ideas. I was amazed at some of the home-built gadgets that were hanging on the back of the VIC's. What do all those 'little black boxes' do, Adrian??? I'm sure they won't be long before they start to appear on the ports of the '64'.

Bob has apparently made some enquiries, and it appears that any of our group who would like to venture to Laverton will be issued with a restricted ID pass, enabling entry to the base for the nights that the group meets. I'm sure they would like to see you down there.

Bob may be contacted on 368 1546 (B.H.) or 369 4068 (A.H.)

Well for my part, I'm glad we've got a sister, as I have now seen some of the potential that is available.

I don't think that this will be my last visit to Laverton!

Frank

Ask for these programs. They're (nearly) free.

These programs are currently in the '64' public domain software library.

MC SPRITE EDITOR

This is a utility for the creation of sprites, and the matrix is displayed on the screen and controlled from the keyboard. The data thus initialised is available as data statements for copying or saving to disk or tape, and can then be added to your own program. For those people who don't want to pay higher prices for commercial software to get the feel of sprites, this may be what you're after.

MASTER 64

This program is the one you have all played called 'Mastermind'.

You may choose at the outset whether to play single handed against the computer which picks a random combination or double handed, where you may play another person.

When you have made your choice, there are three levels of play, and they get harder as they go up (more colours, multiple colours).

The computer keeps track of your tries and returns the ones in the right place and the ones picked in the wrong place.

When you pick the right combination, the computer gives you a congratulatory message.

SUPERMON 64

This machine code program written by Jim Butterfield, Associate Editor of Compute Magazine, is a good start to the enjoyment of 6502 Assembly Language.

With this utility you can view the memory locations, assemble and disassemble routines, load and save to tape or disk, hunt memory for locations of certain sequences of code, and print out disassemblies to printers, and more.

One of the good things about this utility is its ability for relocation to a higher section of memory, thereby allowing you to load a program into another section, and then viewing how it works.

Although fairly confusing to first-time users, machine code is an intriguing part of your '64', and if you see machine language routines run against their basic conversions, you will be astounded at the increase in speed.

Whilst this may not be as powerful as the commercially available monitors (HESMON, etc.), its use is still quite extensive.

Having used HESMON, EXTRAMON, SUPERMON, and MICROMON on the PET for quite some time, this package is highly recommended.

I don't believe it.

From Neil Brandie

As an introduction to a series of examples of how to best use the powerful functions of your computer, I submit the following two programs to key in and see the vast differences between two methods of achieving the same result.

Another two formulae to try could be:-

$x * 5$ compared to $x + x + x + x + x$

Note: I would suggest trying a larger destination of the FOR/NEXT loop (e.g. 5000).

Would like to hear of your results and also of other experimentation.

```

5 PRINT "Q"
10 PRINT "FORMULA IS  $X^2$ "
20 X=10
25 TI$="000000"
30 FOR I=1 TO 1000
40 A= $X^2$ 
50 NEXT I
60 PRINT "TIME TAKEN WAS ";
  RIGHT$(TI$,2); " SECONDS"
70 PRINT:PRINT
80 PRINT "ALTERNATE METHOD IS  $X*X$ "
90 TI$="000000"
100 FOR I=1 TO 1000
110 A=X*X
120 NEXT I
130 PRINT "TIME TAKEN WAS ";
  RIGHT$(TI$,2); " SECONDS"

```

★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★

```

5 PRINT" "
10 PRINT"FORMULA IS X↑5"
20 X=10
25 TI$="000000"
30 FOR I=1 TO 1000
40 A=X↑5
50 NEXT I
60 PRINT"TIME TAKEN WAS ";
  RIGHT$(TI$,2);" SECONDS"
70 PRINT:PRINT
80 PRINT"ALTERNATE METHOD IS XXXXX*XX"
90 TI$="000000"
100 FOR I=1 TO 1000
110 A=XXXXX*XX
120 NEXT I
130 PRINT"TIME TAKEN WAS ";
  RIGHT$(TI$,2);" SECONDS"

```

GET & INPUT STATEMENTS

```
10 REM SINGLE CHARACTER ENTRY
20 PRINT"HIT ANY KEY ";
30 GET A$: IF A$ = "" THEN 30
40 PRINTA$
50 PRINT: GOTO20
```

```

10 REM MULTI CHARACTER WORD (5 CHARS.
20 B$=""
30 PRINT"ENTER THE NAME ";
40 FORX = 1 TO 5
50 GET A$: IF A$ = "" THEN 50
60 B$ = B$ + A$
70 PRINT A$;
80 IF A$ = CHR$(13) THEN 100
90 NEXT X
100 PRINT:PRINT
110 PRINT B$: PRINT
120 GOTO 20

```

```

10 REM CREATE AND INITIALISE ARRAY
20 DIM B(5)
30 FOR I = 1 TO 5
40 INPUT "BALANCE ";B(I)
50 NEXT I
60 REM PRINT ARRAY CONTENTS
70 FOR X = 1 TO 5
80 PRINT"NEW BALANCE ";B(X)
90 NEXT X
100 REM TRANSACT ACCOUNT
110 INPUT"ACCOUNT NO. ";A
120 INPUT"TRANSACTION (+ OR -) ";T
130 B(A) = B(A) + T
140 GOTO 70

```

LIBRARY

LIBRARY

PAUL & JOAN RAUTMAN

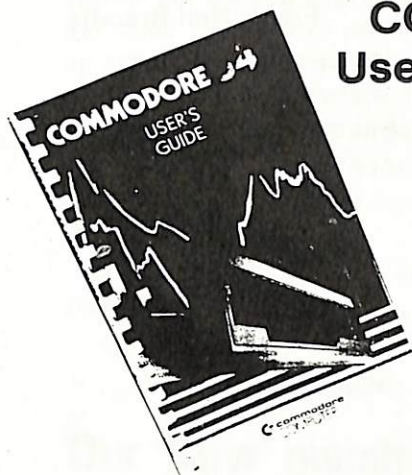
Librarians

29 Kennealy Street, Surrey Hills 3127

Phone: 836 0785

PROGRAMMES, SUBROUTINES, UTILITIES

These are all needed. If you have any or all of these, please submit them to your librarians (Paul & Joan) at the above address or at the next meeting.



COMMODORE 64 User's Guide Update

Reprinted from *COMMODORE MAGAZINE*
Vol 3 Issue 1

Introduction

Commodore is constantly trying to bring you the most efficient and reliable computer in the world today. Along with the hardware improvements that come from practical applications of the Commodore 64 in the marketplace, the documentation should also reflect any changes and/or improvements that occur. This is the most up-to-date information available for your Commodore 64. The changes listed here should be used to replace the comparable information in your User's Guide.

The format of this update is as follows:

- A 1. Page and Paragraph or Section of the Commodore 64 User's Guide.
- 2. Old information.
- 3. New information.

EXAMPLE:

- A 1. P. 2, SIDE PANEL CONNECTIONS, 3. Game Ports
- 2. Each game connector can accept a joystick, game controller, or lightpen.
- 3. Each game connector can accept a joystick or game controller paddle, while the lightpen can only be plugged into the game port closest to the front of your computer.

The following list is in numerical order by page.

- A 1. P. vii, INTRODUCTION, paragraph 3
- 2. ... the SPRITE EDITOR lets you animate as many as 8 different picture levels at one time.
- 3. ... at one time. The SPRITE EDITOR will soon be available as a software program that you can load directly into your Commodore 64.
- B 1. P. vii, INTRODUCTION, paragraph 4
- 2. ... a programmable ADSR ... generator, an envelope generator, ... filters for each voice
- 3. ... a programmable ADSR ... envelope generator and a programmable high, low, and bandpass filter for the voices
- C 1. P. 2, SIDE PANEL CONNECTIONS, 3. Game Ports
- 2. Each game connector can accept a joystick, game controller, or lightpen.
- 3. Each game connector can accept a joystick or game controller paddle, while the lightpen can only be plugged into the game port closest to the front of your computer.
- D 1. P. 3, figure 1
- 2. Control port at (3)
- 3. CONTROL PORT 1 CONTROL PORT 2 at (3)
- E 1. P. 3, figure 2
- 2. (5) CHANNEL SELECTOR
- 3. above (5) <- Ch. 3 Ch. 4 ->
- F 1. P. 3, CONNECTIONS TO YOUR TV, I.
- 2. ... push it in. The cable will only go in one way.
- 3. ... push it in. Either end of the cable can be used.
- G 1. P. 4, 6.
- 2. ... channel selector switch (channel 3 or 4)
- 3. ... channel selector switch (channel 3 move the switch to the left, channel 4 move the switch to the right)
- H 1. P. 8, USING THE COMMODORE 64, I.
- 2. ... the rocker switch on the left-side panel
- 3. ... the rocker switch on the right-side panel when you're looking at the computer from the front.
- I 1. P. 10, TROUBLESHOOTING CHART
- 2. Picture with excess background noise
- 3. Sound with excess background noise
- J 1. P. 10, CURSOR
- 2. The flashing square next to READY ...
- 3. The flashing square under READY ...
- K 1. P. 14, KEYBOARD, paragraph 4
- 2. ... the graphic character on the right side of the key.
- 3. ... the graphic character on the right hand side of the front part of the key.
- L 1. P. 14, KEYBOARD, last sentence
- 2. ... special function keys ... marked on the upper part of the key.
- 3. ... special YELLOW function keys ... marked on the front of the key.

- M 1. P. 18, TIP, paragraph 1
- 2. ... normal display. Simultaneously depress:
- 3. ... normal display. First press the RUN/STOP key and then press the RESTORE key. RUN/STOP must always be held down in order to use the RESTORE key function.
- N 1. P. 18, TIP, Last paragraph
- 2. ... type, SYS64738 and press RETURN.
- 3. ... type, SYS64759 and press RETURN.
- O 1. P. 18, 1. CARTRIDGES
- 2. ... REMOVING CARTRIDGES OR YOU WILL DESTROY THE CARTRIDGE!
- 3. ... REMOVING CARTRIDGES OR YOU MAY DAMAGE THE CARTRIDGE AND/OR YOUR COMMODORE 64!
- P 1. P. 19, 3. DISK, sentence 4
- 2. ... protective gate by pushing in on the lever.
- 3. ... protective gate by pushing down on the lever.
- Q 1. P. 20, paragraph 1
- 2. ... blank, turning the background color of the screen ...
- 3. ... blank, turning the border color of the screen ...
- R 1. P. 20, LOADING PROGRAMS FROM DISK
- 2. After LOAD "PROGRAM NAME.8"
- 3. The 8 is the code for the disk, so you're just letting the computer know that you want the program loaded from the disk.
- S 1. P. 29, Paragraph 2
- 2. You must always separate the parts of a mixed print statement with some punctuation for it to work properly.
- 3. You can separate the parts of a mixed print statement with punctuation for various formats.
- T 1. P. 34, EDITING TIPS, last paragraph
- 2. Try editing our sample ...
- 3. Try editing our sample program on page 33 by changing line 10 and adding a comma to the end of the line. Then RUN the program again.
- U 1. P. 45, First paragraph
- 2. Pretty neat!
- 3. Pretty neat! To stop the program hold down RESTORE and hit RUN/STOP.
- V 1. P. 45, Last line
- 2. PROMPT MUST BE LESS THAN 40 CHARACTERS.
- 3. PROMPT MUST BE 38 CHARACTERS OR LESS.
- W 1. P. 46, Program
- 2. 20 IF AS = "" THEN 100
- 3. 30 IF AS = "F" THEN 100
- 4. 40 IF AS = "C" THEN 50
- 5. 20 IF AS = "" THEN 20
- 6. 30 IF AS = "F" THEN 100
- 7. 40 IF AS <> "C" THEN 10
- X 1. P. 48, Program Line 20
- 2. 20 GET AS: IF AS = "" THEN 20
- 3. 20 GET AS: IF AS = "" THEN 20 ← No space between quotes
- Y 1. P. 49, Sample program
- 2. IF YOU ... APPEAR AS 1 ROW
- 3. IF YOU ... APPEAR AS 1 COLUMN
- Z 1. P. 50, General formula for random numbers
- 2. NUMBER = INT((UPPER LIMIT * RND(1)) + LOWER LIMIT
- 3. NUMBER = INT(LOWER LIMIT + (UPPER - LOWER + 1) * RND(1))
- AA 1. P. 51, Sample program
- 2. 60 IF GU = NM THEN PRINT "GREAT! YOU GOT MY NUMBER"
- 3. 60 PRINT "GREAT! YOU GOT MY NUMBER"
- BB 1. P. 51, Sample program
- 2. 100 IF ANS <> "N" THEN 80
- 3. 100 IF ANS <> "N" THEN 70
- CC 1. P. 57, KEYBOARD COLOR DISPLAY Chart
- 2. CTRL 1 BLACK + 1
- 3. CTRL 1 BLACK + 1
- DD 1. P. 58, COLOR CHRS CODES, screen display
- 2. 10 PRINT CHR\$(30); "CHR\$(30) CHANGES ME TO"
- 3. 20 PRINT CHR\$(30); "CHR\$(30) CHANGES ME TO"
- EE 1. P. 64, Top of the page
- 2. POKE 1524,81
- 3. POKE 1524,81
- POKE 55796,1
- FF 1. P. 69, SPRITE CREATION, paragraph 5
- 2. Sprites are displayed in a special high-resolution mode which turns the screen into a 320 dot wide by 200 dot high area.
- 3. Sprites are displayed in a special independent 320 dot wide by 200 dot high area. However, you can use your Sprite with any mode, high-resolution, low-resolution, text, etc.
- GG 1. P. 71, Line 230 in program
- 2. 230 DATA 1,62,64,0,15,128,0,156,128,0,73,0,0,73,0
- 3. 230 DATA 1,62,64,0,156,128,0,156,128,0,73,0,0,73,0
- HH 1. P. 72, first sentence
- 2. ... you need to know from which 64 block section each series of 8 memory blocks will get sprites in their data ...
- 3. ... you need to know from which 64 byte section (1 whole sprite) each series of 8 memory blocks (1 row of sprite making data) will give each sprite its data ...
- II 1. P. 72, Step 1
- 2. ... location 21 which turns on the sprite.
- 3. ... location 21 a 1 for the bit which turns on the sprite.
- JJ 1. P. 76, Paragraph 2
- 2. Now start to move in the usual X direction register for sprite 2 (which is in location 4 of the map) starting from 1 again.
- 3. Now start from 0 again in the usual X direction register for sprite 2 (which is in location 4 of the map).

- KK 1. P. 76, Additional notes on sprites, additional paragraph
- 2. ...
- 3. To define multiple sprites, you may need additional blocks for the sprite data. You can use some of BASIC's RAM by moving BASIC. Before typing or loading your program type: POKE 44,16:POKE 16*256,0:NEW
- Now, you can use blocks 32 through 41 (locations 2048 through 4095) to store sprite data.
- LL 1. P. 77, BYTE, second sentence
- 2. ... you can actually have a total of 255 different combinations ...
- 3. ... you can actually have a total of 256 different combinations ...
- MM 1. P. 80, STRUCTURE OF A SOUND PROGRAM
- 2. VOLUME, WAVEFORM CONTROL ... EACH NOTE you play
- 3. VOLUME, ATTACK/DECAY, SUSTAIN/RELEASE(ADSR), WAVEFORM CONTROL and HIGH FREQUENCY/LOW FREQUENCY. The first three settings are usually set ONCE at the beginning of your program. The high and low frequency settings must be set for EACH NOTE you play. The waveform control starts and stops each note.
- NN 1. P. 80, SAMPLE SOUND PROGRAM
- 2. 1. Set VOLUME at highest setting: 10 POKE 54296,15
- 3. First clear sound chip 5 FORL = 54272 TO 54296:POKE L,0:NEXT
- 1. Set VOLUME at highest setting: 10 POKE 54296,15
- OO 1. P. 80, SAMPLE SOUND PROGRAM
- 2. 2. Set ATTACK/DECAY levels
- 3. Set ATTACK/DECAY rates
- PP 1. P. 80, SAMPLE SOUND PROGRAM
- 2. 3. Set SUSTAIN/RELEASE rate to prolong note at a certain volume and release it.
- 3. 3. Set SUSTAIN/RELEASE to define level to prolong note and rate to release it.
- QQ 1. P. 80, SAMPLE SOUND PROGRAM
- 2. 40 POKE 54273,17:POKE 54272,37
- 3. 40 POKE 54273,17:POKE 54272,37
- RR 1. P. 81, SAMPLE SOUND PROGRAM
- 2. 5. Set WAVEFORM to ...
- 3. 5. Start WAVEFORM with ...
- SS 1. P. 81, 7. WAVEFORM
- 2. 7. Turn off the WAVEFORM CONTROL and ADSR settings. 70 POKE 54276,0:POKE 54277,0:POKE 54278,0
- 3. 7. Turn off note. 70 POKE 54276,16
- TT 1. P. 81, MAKING MUSIC ON YOUR COMMODORE 64, program
- 2. 5 REM MUSICAL SCALE
- 3. 10 POKE 54296,15
- 50 READ A
- 3. 5 REM MUSICAL SCALE
- 7 FORL = 54272 TO 54296:POKE L,0:NEXT
- 10 POKE 54296,15
- 20 POKE 54277,7:POKE 54278,133
- Seis Attack/Decay, Sustain/Release level (each note)
- 50 READ A
- UU 1. P. 82, Sample program
- 2. 60 READ B
- 100 GOTO 20
- 60 READ B
- 70 IF B = 1 THEN END
- 80 POKE 54273,A:POKE 54272,B
- 85 POKE 54276,17
- Start note
- 90 FOR T = 1 TO 250:NEXT:POKE 54276,16
- Let it play then stop note
- 95 FOR T = 1 TO 50:NEXT
- Time for release
- 100 GOTO 20
- VV 1. P. 82, Last complete paragraph
- 2. To change the sound to a "harpisichord," change Line 30 ... and RUN
- 3. To change the sound to a "harpisichord," change Line 85 to read POKE 54276,33 and line 90 to read FOR T = 1 TO 250:NEXT:POKE 54276,32 and RUN
- WW 1. P. 82, Last complete paragraph
- 2. ... Changing the WAVEFORM can drastically change the sound by the COMMODORE 64 ...
- 3. ... Changing the WAVEFORM can drastically change the sound produced by the COMMODORE 64 ...
- XX 1. P. 82, last sentence and POKE statement
- 2. ... to a more "banjo" sound try changing line 20 to read: 20 POKE 54277,3
- 3. ... to a more "banjo" sound try changing lines 20 and 30 to read: 20 POKE 54277,3 30 POKE 54278,0 ← Sets no sustain for banjo effect.
- YY 1. P. 83, 1. VOLUME
- 2. ... POKE 54296,15. The volume setting ranges from 0 to 15 but you'll use 15. The volume ...
- 3. ... POKE 54296,15. The volume ...
- ZZ 1. P. 83, 2. ADSR and WAVEFORM CONTROL SETTING
- 2. A sample waveform ...
- 3. A sample waveform start setting ...
- AAA 1. P. 83, 2. ADSR and WAVEFORM CONTROL SETTING
- 2. ... the second number (17) represents a triangular ...
- 3. ... the second number (17) represents the start for a triangular ...

Continued next issue